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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,918	05/09/2006	Kiyotaka Kanno	056205.57703US	1829

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EXAMINER	
BUI, HUNG S	

ART UNIT	PAPER NUMBER
2841	

MAIL DATE	DELIVERY MODE
07/07/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,918	KANNO ET AL.	
	Examiner	Art Unit	
	HUNG S. BUI	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/09/2006; 01/11/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

1. The oath/declaration filed on 05/09/2006 is acceptable.

Information Disclosure Statement

2. The IDS filed on 05/09/2006 and 01/11/2007 have been considered and made of record.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Riehl et al. [US 6,445,584].

Regarding claim 1, Riehl et al. disclose a control module (figures 1-5) comprising a control circuit unit disposed in a wiring board (6, figure 4, column 3, line 26) connecting terminals of said control circuit unit to connectors (7, 8, figure 4, column 2, lines 53-54), said control circuit unit and said wiring board being contained between a cover (5, figure 5) and a base (4, figure 5),

wherein said wiring board has a resin molded part (21-22, 25, figure 1) formed by resin-molding nearly central portions of bus bars, which are constituted by a plurality of conductors (33, figures 1-2 and 4), the resin molded part serving as a rigid region, and a part where the bus bars are exposed serves as a flexible region (figures 1-2);

said base is shaped to be contacted with said cover when said cover and said base are fitted to each other, and has protrusions each formed to position between the adjacent bus bars in the flexible region (figures 4-5); and

contact portions between said cover and the protrusions of said base are fixedly bonded to each other (figures 4-5).

Regarding claim 2, Riehl et al. disclose a frame (2, figure 1-5) arranged to surround an outer periphery of said control circuit unit and shaped to be contacted with said cover and said base when said cover and said base are fitted to each other (figure 5),

wherein one respective ends of the bus bars in said wiring unit are arranged to penetrate through said frame (figures 1 and 4-5); and

contact portions (figures 1 and 4) between said cover and said frame contact portions between said base and said frame, or contact portions between a protrusion provided on said base to penetrate through said frame and said cover are fixedly bonded to each other.

Regarding claim 3, Riehl et al. disclose said frame being made of resin (column 2, lines 49-50); said resin molded part and said frame are integrally molded with resin; and the contact portions between said cover and said frame and the contact portions between said base and said frame are fixedly bonded to each other (figures 4-5).

Regarding claim 4, Riehl et al. disclose said frame being made of a material having elasticity; and the contact portions between the protrusion provided on said base to penetrate through said frame and said cover are fixedly bonded to each other (column 2, lines 49-50).

Regarding claim 5, Riehl et al. disclose a control module (figures 1-5) comprising a control circuit unit and a wiring board (6, figure 4) connecting terminals (7, 8, figures 1 and 4) of said control circuit unit to connectors, said control circuit unit and said wiring unit being contained between a cover and a base (4, 5, figure 5);

wherein said control module further comprises a frame (2, figures 1 and 4) arranged to surround an outer periphery of said control circuit unit and shaped to be contacted with said cover and said base when said cover and said base are fitted to each other (figures 4-5);

one respective ends of the bus bars in said wiring unit are arranged to penetrate through said frame (7, 8, figures 1 and 4); and

contact portions (figures 1 and 4-5) between said cover and said frame, contact portions between said base and said frame, or contact portions between a protrusion provided on said base to penetrate through said frame and said cover are fixedly bonded to each other (figures 1 and 4).

5. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Murakami [US 6,354,846].

Regarding claim 1, Murakami discloses a control module (figure 6) comprising a control circuit unit (30, figure 6) and a wiring unit (26, figure 6) connecting terminals of said control circuit unit to connectors (21a, 21b, figure 6), said control circuit unit and said wiring unit being contained between a cover and a base (21, 22, figure 6),

wherein said wiring unit has a resin molded part (24, figure 6) formed by resin-molding nearly central portions of bus bars (25, 25a, figure 6), which are constituted by a plurality of conductors, the resin molded part serving as a rigid region, and a part where the bus bars are exposed serves as a flexible region (figure 6);

said base is shaped to be contacted with said cover when said cover and said base are fitted to each other, and has protrusions each formed to position between the adjacent bus bars in the flexible region (figure 6); and

contact portions between said cover and the protrusions of said base are fixedly bonded to each other (figure 6).

Regarding claim 2, Murakami discloses a frame (a peripheral flange protruded therefrom the base, figure 6) arranged to surround an outer periphery of said control circuit unit and shaped to be contacted with said cover and said base when said cover and said base are fitted to each other,

wherein one respective ends of the bus bars in said wiring unit are arranged to penetrate through said frame; and

contact portions between said cover and said frame contact portions between said base and said frame, or contact portions between a protrusion provided on said base to penetrate through said frame and said cover are fixedly bonded to each other (figure 6).

Regarding claim 3, Murakami discloses said frame being made of resin; said resin molded part and said frame are integrally molded with resin; and the contact portions

between said cover and said frame and the contact portions between said base and said frame are fixedly bonded to each other (column 7, lines 43-46).

Regarding claim 4, Murakami discloses said frame being made of a material having elasticity; and the contact portions between the protrusion provided on said base to penetrate through said frame and said cover are fixedly bonded to each other (figure 6 and column 7, lines 43-46).

Regarding claim 5, Murakami discloses a control module (figure 6) comprising a control circuit unit (30, figure 6) and a wiring unit (26, figure 6) connecting terminals of said control circuit unit to connectors (21a, 21b, figure 6), said control circuit unit and said wiring unit being contained between a cover and a base (21, 22, figure 6),

wherein said control module further comprises a frame (a peripheral flange protruded therefrom the base 22, figure 6) arranged to surround an outer periphery of said control circuit unit and shaped to be contacted with said cover and said base when said cover and said base are fitted to each other; one respective ends of the bus bars in said wiring unit are arranged to penetrate through said frame (figure 6); and

contact portions between said cover and said frame, contact portions between said base and said frame, or contact portions between a protrusion provided on said base to penetrate through said frame and said cover are fixedly bonded to each other (figure 6).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Grant [US 6,703,703] discloses low cost power semiconductor module without substrate;
- Yoneda et al. [US 5,443,550] disclose electronic circuit apparatus, apparatus for removing electromagnetic wave noise; and
- Funahashi et al. [US 7,207,187] disclose inverter-integrated motor for an automotive vehicle.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hung S. Bui/
Primary Examiner, Art Unit 2841
06/04/2009